GURVICH, M.Ya.

[Boot-making machine and its operation] Nasadochnaia mashina i rabota na nei. Moskva, Gos. nauchno-tekhn.izd-vo tekstil., legkoi i poligr. promyshl., 1948. 54 p. (MLRA 7:11)
(Shoe machinery)

GURVICH, M. YA.

Felt

(Mechanical engineering of fulling felt production) Mekhanicheskaia tekhnologiia valial'no-voilochnogo proizvodstva. Moskva, Gos. mauchno-tekhn. izd-vo legkoi promyshl. 1952.

2

9. Monthly List of Russian Accessions, Library of Congress, December 1958, Uncl.

GURVICH, M.Ya. (Moskva)

Spiny dogfish. Priroda 50 no.12:115 D '61. (MIRA 14:12)
(Black Sea--Dogfish) (Felt work)

POPOV, Vasiliy Alekseyevich; ASTREIN, Avenir Arkad'yevich; UZDIN, David Konstantinovich; GURVICH, Natan Borisovich; SOKOLOV, V.G., red.; OTOCHEVA, M.A., red. izd-va; LEIYUKHIN, A.A., tekhn. red.

[Operation, maintenance and repair of trolley bus rolling stock] Ekspluatatsiia i remont podvizhnogo sostava trolleibusa. Pod obshchei red. V.A.Popova. Moskva, Izd-vo M-va kommun.khoz. RSFSR, 1961. 471 p. (MIRA 15:3)

(Trolley buses)

GURVICH, N. G.

AID P - 940

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 9/25

Authors : Akopyan, A. A., Kand. of Tech. Sci., Gurvich, N. G., Kand. of Med. Sci., Zhukov, I. A., Eng., Negovskiy, V. A., Doc. of Med. Sci.

Title : Possibility of cardiac resuscitation by means of impulses during ventricular fibrillation

Periodical : Elektrichestvo, 10, 43-49, O 1954

Abstract : Experiments with de-fibrillation of dogs' hearts are described and optimal impulse characteristics were determined. Possibilities of application to the human organism are discussed. A description of the de-fibrillator, generating electric impulses is given. Ten photographs and drawings, 23 references (6 Russian: 1899-1954).

Institutions: All-Union Institute of Electrical Engineering im. Lenin; Laboratory of Experimental Physiology for the Revival of Organisms of the Academy of Medical Sciences

Submitted : Jl 10, 1954

GURVICH, N.L., doktor med.nauk; AKOPYAN, A.A., prof.; ZHUKOV, I.A., inzh.

Constant magnitude of an injurious electric current. Vop.elektropat. i elektrotrav. 1:15-21 '61. (MIRA 15:10)

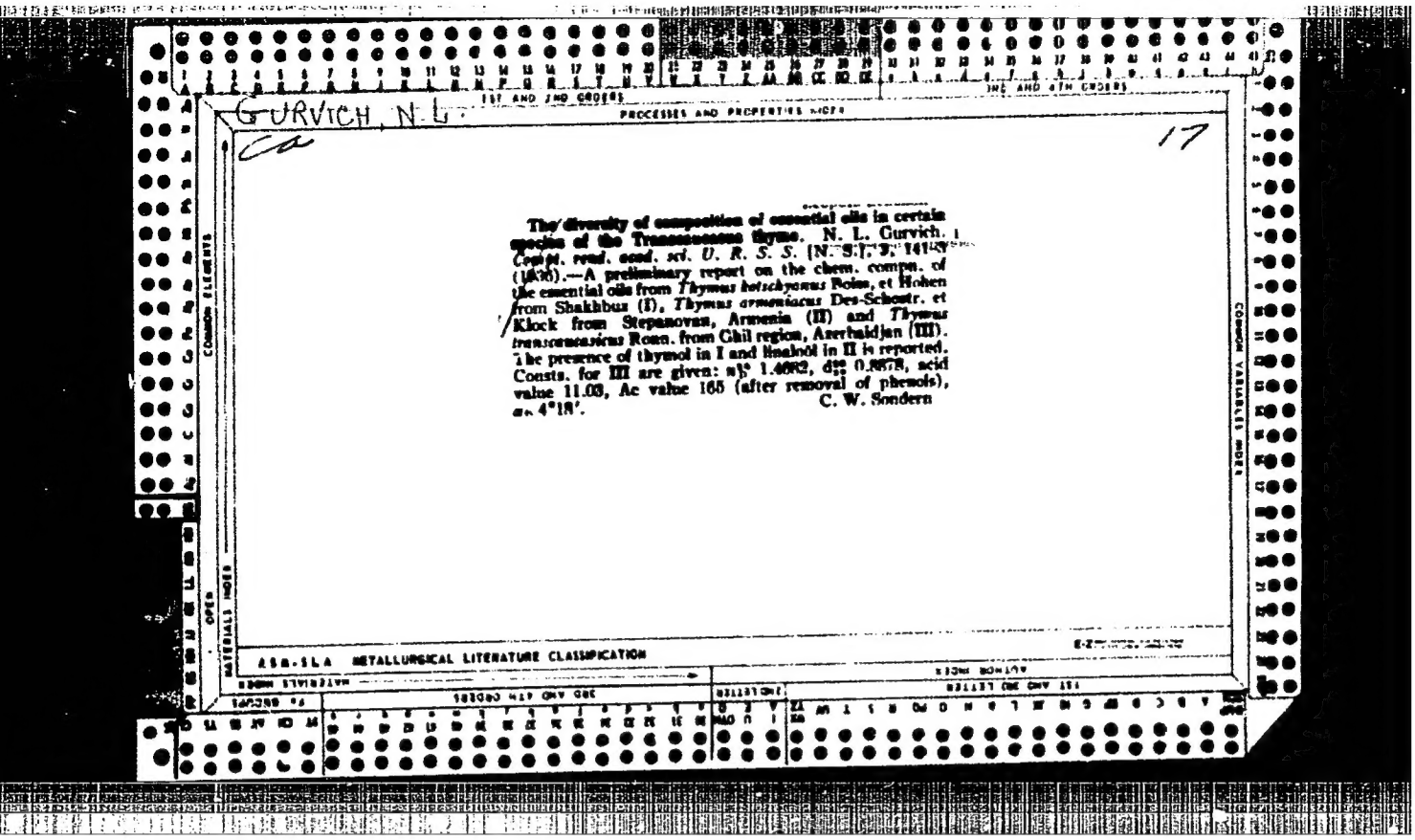
1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A.Negovskiy) AMN SSSR i laboratoriya perenapryazheniy (zav. - prof.A.A.Akopyan) Vsesoyuznogo elektrotekhnicheskogo instituta im. V.I.Lenina.
(ELECTRICITY, INJURIES FROM)

GURVICH, Naum Lazarevich; NEYMAN, M.I., red.; BUKOVSKAYA, N.A., tekhn. red.

[Electric trauma; prevention and first aid] Elektrotravma; profilaktika i okazanie pervoi pomoshchi. Moskva, Medgiz, 1963. 31 p. (MIRA 16:5)
(ELECTRICITY, INJURIES FROM)

ALEKSEYEVA, Ye.I., kand. sel'khoz. nauk; BUZINOV, P.A., kand. sel'khoz. nauk; VODOLAGIN, V.D.; VOLKHOVSKAYA, U.V.; GLUSHCHENKO, N.N., kand. biol. nauk; GURVICH, N.L., doktor biol. nauk; ZHELEZNOV, P.A., kand. sel'khoz. nauk; KSENDZ, A.T.; LESHCHUK, T.Ya.; LUK'YANOV, I.A., kand. sel'khoz. nauk; MAYCHENKO, Z.G., kand. sel'khoz. nauk; TANASIYENKO, F.S., kand. khim. nauk; ZNAMENSKIY, M.P.; PERSIDSKAYA, K.G.; PODLESNOVA, A.F.; ROGOCHIY, I.Ya.; REZNIKOV, A.R.; SHUL'GIN, G.T.; KHOTIN, A.A., doktor sel'khoz. nauk; LAPSHINA, O.V., red.; MINENKOVA, V.R., red.; MAKHOVA, N.N., tekhn. red.; BALLOD, A.I., tekhn. red.

[Aromatic plants] Efiromaslichnye kul'tury. Moskva, Sel'-khozizdat, 1963. 358 p. (MIRA 16:12)
(Ukraine--Aromatic plants)



GURVICH, N. L.

CA

17

The diversity of composition of essential oils in certain species of the Transcaucasian thyme. N. L. Gurvich. Compt. rend. acad. sci. U. R. S. S. [N. S.] 2, 141-5 (1936).—A preliminary report on the chem. compn. of the essential oils from *Thymus hotschyanus* Boiss. et Hohen from Shakhbuz (I), *Thymus armeniacus* Des-Schoutr. et Klock from Stepanovan, Armenia (II) and *Thymus transcaucasicus* Ronn. from Ghil region, Azerbaidjan (III). The presence of thymol in I and linalool in II is reported. Consts. for III are given: n_D^{20} 1.4682, d_{20}^{20} 0.8878, acid value 11.03, Ac value 165 (after removal of phenols), α_D 4°18'.

C. W. Sondern

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GURVICH, N. L. PA 17/49T87

USSR/Medicine - Botany May/Jun 48
Medicine - Taxonomy

"Plants Containing Ester Oils, Their Habitats and Their place in Phylogenetic Classification Systems," N. L. Gurvich, Baku, 5 pp

"Botan Zhur" Vol XXXIII, No 3

Conclusions are largely based on study of Azerbaydzhan flora. Submitted 20 Oct 47.

[redacted] 17/49T87

GURVICH, N.L.

Some results of the introduction of essential oil plants in the U.S.S.R. Trudy Bot.inst.Ser.6 no.7:74-84 '59.
(MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i efiromaslichnykh kul'tur (VNIIMEMK), Krasnodar.
(Aromatic plants)

GURVICH, N.L.

Classification of essential oil plants. Trudy Bot.inst.Ser.5 no.6: 7-126 '60. (MIRA 13:6)
(Essences and essential oils)

GURVICH, N.L., doktor biolog.nauk; NEPARIDZE, N.I.

Rapid method for determining the essential oil content of roses and basils by means of a nephelometer. Masl.-zhir.prom. 26 no.10:22-23 O '60. (MIRA 13:10)

1. Krasnoarmeyskiy efiromaslichnyy sovkhoz-zavod (for Gurvich).
2. Voznesenskaya zonal'naya opytnaya stantsiya (for Neparidze).
(Essences and essential oils)

ALESHINA, L.I., inzh.; GURVICH, N.L., doktor biolog.nauk; FROLOV, V.A., inzh.

Purifying petroleum ether in essential-oil plants of Krasnodar Territory. Masl.-zhir. prom. 27 no.6:31-33 Je '61. (MIRA 14:6)

1. TSentral'naya khimicheskaya laboratoriya Upravleniya pishchevoy promyshlennosti Krasnodarskogo sovnarkhoza (for Aleshina).
2. Krasnoarmeyskiy efiromaslichnyy sovkhoz-zavod (for Gurvich).
3. Upravleniye pishchevoy promyshlennosti Krasnodarskogo sovnarkhoza (for Frolov).

(Krasnodar Territory--Essences and essential oils)
(Ligroine)

ALESHINA, L.I., inzh.; TISHKOV, V.I.; GURVICH, M.L.

Methods for determining the essential oil content of eugenol basil. Masl.-zhir. prom. 27 no.7:34-36 Jl '61. (MIRA 14:7)

1. Tsentral'naya khimicheskaya laboratoriya Upravleniya pishchevoy promyshlennosti Krasnodarskogo sovnarkhoza (for Aleshina). 2. Matyrbovskiy efiromaslichnyy [illegible] "Elit" (for Tishkova). 3. Krasnoarmeyskiy efiromaslichnyy sovkhoz-zavod (for Gurvich).

(Essences and essential oils)
(Basil(Botany))

ALESHINA, L.I., inzh.; GURVICH, N.L., doktor biolog.nauk

Results of sage (Salvia) harvesting by a combine.
Masl.-zhir.prom. 28 no.7:37-38 Jl '62. (MIRA 15:11)

1. TSentral'naya khimicheskaya laboratoriya Upravleniya pishchevoy promyshlennosti Krasnodarskogo soveta narodnogo khozyaystva (for Aleshina). 2. Krasnoarmeyskiy efiromaslichnyy sovkhoz-zavod (for Gurvich).
(Sage)

GURVICH, N.L., doktor biolog.nauk

Improved laboratory still for the distillation of essentail oils. (MIRA 16:2)
Masl.-zhir.prom. 29 no.1:35 Ja '63.

1. Krasnoarmeyskiy efiromaslichnyy sovkhoz-zavod.
(Distillation apparatus) (Essences and essential oils)

GURVICH, M.L., doktor biol. nauk

More precise determination of harvest time for musk sage. Masl.-zhir. prom. 29 no.3:25-26 Mr '63. (MIRA 16:4)

1. Krasnoarmeyskiy efiromaslichnyy sovkhoz-zavod.
(Essences and essential oils) (Sage)

GURVICH, N.L.

Use of solvent pairs and the nephelometer for the quantitative microanalysis of linalool in coriander oil. Izv. AN Azerb. SSR. Ser. biol. nauk no.2:11-17 '64. (MIRA 17:10)

ACCESSION NR: AP4000269 S/0219/63/056/011/0039/0043

AUTHOR: Nogovskiy, V. A.; Soboleva, V. I.; Gurvich, N. L.; Kiseleva, K. S.

TITLE: Deep hypothermia as a method for prolonging clinical death periods

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny*, v. 56, no. 11, 1963, 39-43

TOPIC TAGS: hypothermia, clinical death, resuscitation process, resuscitation process inhibitor, loss of blood, blood loss, acute blood loss, blood infusion, intraarterial infusion, intraarterial blood infusion, blood perfusion, heart dilation, hemodynamic disturbance, metabolic acidosis

ABSTRACT: In two groups of experimental dogs body temperature was reduced to 20-23°C and venesection was performed to induce clinical death. Animals were revived after clinical death of two hours with heat, blood perfusion, artificial respiration, defibrillation, and heart stimulation. Electrocardiograms were recorded during the entire experiment. In the first group of 23 dogs only 5 animals survived

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ACCESSION NR: AP4000269

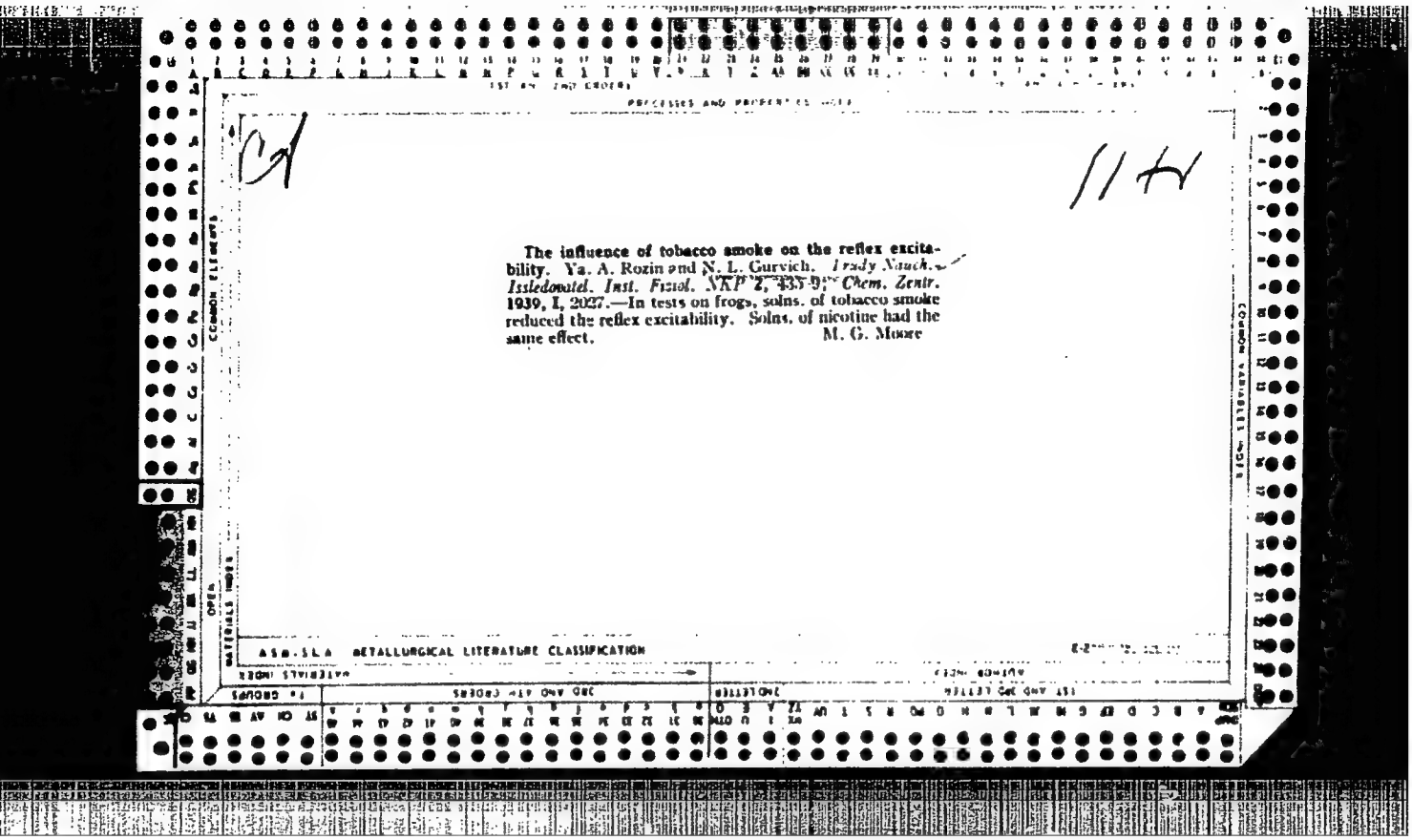
clinical death with complete restoration of their vital functions. All other animals in this group either died within 2 days after the experiment or failed to revive at all. Resuscitation failure was attributed to imperfect blood perfusion causing acute heart dilation, marked hemodynamic disorders during restoration period, and severe acidosis inhibiting further restoration and leading to serious changes in the brain and internal organs. These factors were controlled in reviving the second group of 8 dogs, and fresh donor blood and blood substitution were also used in the later stages of revival. All 8 animals were revived and vital functions were completely restored in 5 of the animals. Thus, under deep hypothermia clinical death can be prolonged to 2 hrs with subsequent complete restoration of vital functions. Orig. art. has: none.

ASSOCIATION: Laboratoriya eksperimental'noy fiziologii po ozhivleniyu organisma, AMN SSSR, Moskva (Experimental Physiology Laboratory for Organism Revival, AMN SSSR)

SUBMITTED: 21Jun63 DATE ACQ: 04Dec63 ENCL: 00

SUB CODE: AM NO REF SOV: 006 OTHER: 012

Card 2/2



The influence of tobacco smoke on the reflex excitability. Ya. A. Rozin and N. L. Gurvich. *Trudy Nauch.-Issledovatel. Inst. Fiziol. NKP* 2, 335-9; *Chem. Zentr.* 1939, I, 2027.—In tests on frogs, solns. of tobacco smoke reduced the reflex excitability. Solns. of nicotine had the same effect. M. G. Moore

GURVICH N. L. and YNIEV G. S.
Inst. of Physiol., Acad. of Sciences, USSR
Restora tion of heart rhythm during fibrillation by a condenser discharge
American Review of Soviet Medicine 1947, 4/3 (252-256) Graphs 3

4945 In 650 animals (dogs, sheep, goats) ventricular fibrillation, produced by electric shock or drugs, wa s abolished by condenser discharges and the heart action restored to normal for prolonged observation periods (10 days to 4 months). There was a correlation between the voltage thresholds of the condenser discharges necessary to abolish fibrillation and the weight of the animal, and an inverse relationship between threshold voltage and condenser capacity. Inclusion of an inductive resistance from 0.3 to 0.5 henrys in the circuit lowered the voltage thresholds. It is suggusted that condenser discharges be tried in cases of electrocution in man.

Simonson-Minneapolis

SO: Section II Vol. 1^2 No. 7-12

NEGOVSKIY, V. A;GURVICH, N. L.

Possibility of resuscitation after electric shock. Fel'dsher & akush., Moskva no. 6:6-13 June 1952. (CLML 22:3)

1. Professor for Negovskiy.

GURVICH, N.L.

Restoration of vital functions of the organism following fatal electric shock. Klin. med., Moskva 30 no. 6:66-70 June 1952. (CLML 22:5)

1. Of the Laboratory of Experimental Physiology for Revival of the Organism (Head -- Prof. V. A. Negovskiy), Academy of Medical Sciences USSR.

GURVICH, N.L.

944. The possibility of reviving the organism from fibrillations of the heart by means of an impulse current. A. A. AKOPYAN, N. L. GURVICH, E. A. ZHUKOV AND Y. A. NEKRYLOV [illegible], No. 10, 43-9. In Russian.

It was found that the amplitude of an electric impulse capable of interrupting fibrillations caused by a.c. bears a definite relation to the duration of the impulse. The discharge of a capacitance of 24 μF directly on the thorax of a dog stops fibrillations if the discharge current has an amplitude of 15–30 A and a duration of 2–3 msec. If the same capacitance is discharged through an inductance of ~0·3 henry (pulse duration ~10 msec) the current need only be 6–12 A. It is preferable to use longer impulses of smaller amplitude, since their after-effects on the heart are less dangerous. Experiments on dogs, sheep and goats showed that the magnitude of the defibrillating current increases with the weight of the animal and is independent of its kind. For an animal of 40 kg weight the values are 13–21·5 A and 10 msec. Extrapolation of the experimental results indicates that for a human adult 20–40 A, 10 msec would be required for defibrillation. If defibrillation follows within 2 min from the inception of the fibrillations, normal cardiac activity will be restored without need for any supplementary measures; if it follows only after 7–8 min (this approaching the 10–12 min limit within which success is possible at all) arterial blood-pumping and artificial respiration to stimulate the centre of respiration is required.

B. F. KRAUS

All-Union Elec. Inst. im. Lenin and Lab. Experimental Physiol., AMS USSR

GURVICH, N. L.

GURVICH, N. L. -- "Fibrillation and Defibrillation of the Heart." Acad Med Sci USSR. Moscow, 1956. Laboratory of Experimental Physiology for Restoration of the Organism. (Dissertation for the Degree of Doctor in Medical Sciences).

So.: Knizhnaya Letopis', No. 6, 1956.

TSUKERMAN, A.M., GURVICH, N.L.

Arrest of experimental auricular fibrillation by electrical defibrillation of the auricles [with summary in English]. Exper.khir. 1 no.3:38-44 My-Je '56 (MIRA 11:10)

1. Iz Instituta khirurgii imeni A.V. Vishnevskogo (dir. - chlen-korrespondent AMN SSSR prof. A.A. Vishnevskiy) AMN i laboratorii eksperimental'noy fiziologii (zav. - prof. V.A. Negovskiy) AMN SSSR.
(AURICULAR FIBRILLATION, exper.
eff. of electric defibrillation in dogs (Rus))

GURVICH, N.L.

[Fibrillation and defibrillation of the heart] Fibrilliatsiia i defibrilliatsiia serdtsa. Moskva, Medgiz, 1957. 249 p. (MIRA 11:4)
(ARRHYTHMIA)

GURVICH, N.L.; KOLGANOVA, N.S.; SMIRENSKAYA Ye.M. (Moskva)

Restoration of cardiac activity in clinical death from acute blood loss complicated by ventricular fibrillation [with summary in English]. Pat.fiziol. i eksp.terap. 2 no.6:30-32 N-D '58. (MIRA 12:1)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma AMN SSSR (zav. - prof. V.A. Negovskiy).

(HEMORRHAGE, exper.
induction of ventric. fibrill. & clin. death, restoration of cardiac activity in dogs (Rus))
(RESUSCTATION
clin. death induced by hemorrh. & ventric. fibrill., restoration of cardiac activity in dogs (Rus))
(VENTRICULAR FIBRILLATION, exper.
induced by hemorrh. & followed by clin. death, restoration of cardiac activity in dogs)

NEGOVSKIY, V.A.; SOBOLEVA, V.I.; GURVICH, N.L.; KISELEVA, K.S.; MACHAVARIANI, Sh.S.

Restoration of vital function in monkeys after mortal exsanguination under hypothermic conditions. Biul.eksp.biol.i med. 48 no.11:30-34 N '59. (MIRA 13:5)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A. Negovskiy) AMN SSSR, Moskva, i Instituta eksperimental'noy patologii i terapii (dir. - doktor biologicheskikh nauk I.A. Utkin), Sukhumi. Predstavlena deystvitel'nym chlenom AMN SSSR V.N. Chernigovskim.

(RESUSCITATION exper.)
(HEMORRHAGE exper.)
(HYPOTHERMIA, INDUCED exper.)

KAMYSZEW, A.; GURWICZ, N.L.

Chronaxy of certain motor centers of the brain stem during the course of experimental clinical death and reanimation. Acta physiol. polon. 11 no.5/6:761-763 '60.

1. Z Pracowni Fizjologii Doswiadczalnej Akademii Nauk Medycznych ZSRR, Kierownik: prof.dr W.A.Negowski. Z Zakladu Fizjologii Pomorskiej A.M. z Szczecinie, Kierownik: prof.dr E.Mietkiewski.
(BRAIN STEM physiol)
(DEATH)
(RESUSCITATION)

NEGOVSKIY, V.A.; SOBOLEVA, V.I.; GURVICH, N.L.; KISELEVA, K.S.

Restoration of the vital functions of the organism following 2 hours of clinical death under deep hypothermia; preliminary report. Vest. AMN SSSR 15 no. 10:40-44 '60. (MIRA 14:4)

1. Laboratoriya eksperimental'noy fiziologii po ozhivleniyu organizma AMN SSSR.
(RESUSCUTATION) (HYPOTHERMIA)

GURVICH N.L.

KAMYSZEW, Antoni; GURWICZ, Naum L.

Chronaxy of some motor centers of the brain stem during the course of experimental clinical death and reanimation. Roczn. pom. akad. med. Swierczewski. 7:225-236 '61.

1. Z Zakladu Fizjologii Pomorskiej Akademii Medycznej Kierownik: prof. dr Eugeniusz Mietkiewski i z Pracowni Fizjologii Doswiadczalnej Przywracania do Zycia Ustroju Akademii Nauk Medycznych ZSRR w Moskwie Kierownik: prof. dr Wladimir A. Niegowski.

(BRAIN STEM physiol) (RESUSCITATION) (DEATH)

GURVICH, N.L.; KOLGANOVA, N.S.

Optimal form of impulses for electric stimulation of the heart.
Biul. eksp. biol. i med. 51 no.5:30-32 My '61. (MIRA 14:8)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A.Negovskiy) AMN SSSR Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.
(HEART) (HEART BLOCK)

NEGOVSKIY, V.A.; MIL'O, A.; GURVICH, N.L.; ZOLOTOKRYLINA, Ye.S.

Indirect heart massage in sudden death caused by ventricular fibrillation. Eksper. khir. i anest. 7 no.5:3-11 S-O '62. (MIRA 17:10)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav.- prof. V.A. Negovskiy) AMN SSSR.

NEGOVSKIY, V.A.; SOBOLEVA, V.I.; GURVICH, N.L.; KISELEVA, K.S.

Deep hypothermia as a method of prolonging clinical death periods. Biul. eksp. biol. i med. 56 no.11:39-43 O [i.e.N.] '63. (MIRA 17:11)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A. Negovskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Parinym.

L [illegible]-66 GD-2

ACC NR: AP6009504 (A) SOURCE CODE: UR/0105/66/000/003/0038/0040

AUTHOR: Gurvich, N. L. (Doctor of medical sciences); Nikerbokker, G.* 7
Makarychev, V. A. B

ORG: Laboratory of Experimental Physiology on Organism Resuscitation, AMN SSSR [N. L. Gurvich, V. A. Makarychev] (Laboratoriya eksperimental'noy fiziologii po ozhivleniyu organizma AMN SSSR); Physical Laboratory, Surgery Clinics, Johns Hopkins University, Baltimore, Md., USA* [Hugh Nickerboker]

TITLE: Efficiencies of a single electric impulse and ac used for defibrillation of the heart after an electric shock 22

SOURCE: Elektrichestvo, no. 3, 1966, 38-40

TOPIC TAGS: heart defibrillation, resuscitation

ABSTRACT: The results are reported of an experimental investigation of dog-heart defibrillation by single electric impulses and by more prolonged 50-cps a-c trains. Seventeen dogs weighing from 6 to 15,5 kg were used as test animals;

Card 1/2 UDC: 537:61

L 39684-66
ACC NR: AP6009504

ventricle fibrillation was caused in the dogs by a 3-sec application of 127 v 50 cps power through needle electrodes. Defibrillation was attempted by using an impulse or a-c voltage applied to disk electrodes pressed against the animal's (shaven) breast in the region of its heart. A total of 68 a-c tests and 110 impulse defibrillation tests was carried out. It was found that: (1) Minimum defibrillation impulse current remains fairly constant during successive tests on the same dog; the a-c defibrillation threshold is not so constant but is fairly close to the corresponding impulse-current value; (2) The equal values of impulse and a-c (0.04—0.06 sec) currents indicate the same mechanism of defibrillation in both cases; hence, one cycle of ac (0.02 sec) is recognized as sufficient for resuscitation purposes. Orig. art. has: 3 figures.

SUB CODE: 06, 09 / SUBM DATE: 11Jun65 / ORIG REF: 003 / OTH REF: 003

Card 2/2 BPb

Cand Med Sci

GURVICH, N. M., PHYSICIAN

Dissertation: "Blood Pressure in the Cases of Organic Affection of Brain."
12/6/50

Second Moscow State Medical Inst imeni

I. V. Stalin

SO Vecheryaya Moskva
Sum 71

FEDOT'YEV, N.P.; VYACHESLAVOV, P.M.; GURVICH, O.M.

Microhardness of nickel coatings and its relation to surface microgeometry. Trudy LTI no.53:23-29 '59. (MIRA 14:3)
(Nickel plating) (Hardness)

GURVICH, O. N.

29279 Belaya krov' i ROE pri kleshchevom entsefalite. Trudy Molotovsk. gos. stomatol. in-ta, vyp. 8, 1949, s. 345-52. - Bibliogr: 15 nazv.

SO: Letopsi'Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

S/226/62/000/002/008/010
I003/I203

AUTHOR: Gurvich, O. S. and Marmer, E. N.

TITLE: Mechanical properties of graphite used in vacuum electric furnaces

PERIODICAL: Poroshkovaya metallurgiya, no. 2, 1962, 77-86

TEXT: This work determines the tensile and creep strength of two grades of graphite "A" ППГ (PPG) and "B" ГМЭ (GMZ) produced by the Moscow Electrode Plant. The measurements were made in vacuum at room temperature and in the temperature range of 1800-2300°C. The results coincide with those published in "Materialy II Mezhdunarodnoy konferentsii po mirnomy ispol'zovaniyu atomnoy energii, Atomizdat, M 1959 (Materials of the II International Conference on Peaceful Use of Atomic Energy, Atomizdat, M 1959". There are 8 figures and 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektromicheskogo oborudovaniya (All-Union Scientific Investigation Institute of Electrothermal Equipment)

SUBMITTED: May 15, 1961

Card 1/1

L 09147-67 EWP(e)/EWT(m) WW/WH

ACC NR: AR6027495 SOURCE CODE: UR/0137/66/000/004/B003/B003

AUTHOR: Rusin, S. P.; Gurvich, O. S.

43

TITLE: Determining the emittance of graphite at high temperatures

SOURCE: Ref. zh. Metallurgiya, Abs. 4B17

REF SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 46, 1965, 31-33

TOPIC TAGS: graphite, emissivity constant, temperature

ABSTRACT: A tubular graphite specimen 300 mm long and 14/8 mm in diameter was heated by an alternating electric current. An opening 0.5 mm in diameter was made in the central section of the tube. The true and brightness temperatures of the tubular surface were determined from the radiation escaping through this opening after taking appropriate corrections into consideration. The experiments were done in a vacuum of 10^{-3}-10^{-4} mm Hg. The specimen to be tested was preheated and held at a temperature of 1600-2000°K for 10-15 hours to stabilize the surface state. It is shown that the absolute value of the integral hemispherical emittance ε_t is somewhat reduced when the spectral radiation interval is expanded into the longer wave region. The method of least squares gives temperature relationships of ε_t and ε_λ (monochromatic normal emit-

Card 1/2 UDC: 669:536.3

L 09147-67 495

ACC NR: AR6027459 O

tance) for PPG graphite which may be conveniently given in the form of empirical expressions: $\varepsilon_t=(0.70\pm0.02)+(1.7\pm1.1)\cdot10^{-5}T$, $\varepsilon_\lambda=(0.95\pm0.02)-(4.0\pm1.4)\cdot10^{-5}T$. 2 illustrations. V. Pryanikova. [Translation of abstract]

SUB CODE: 20, 11

Card 2/2 nst

MARMER, E.N., inzh.; GURVICH, O.S., inzh.

Study of friction pairs for operation in vacuum electric furnaces. Vest. elektroprom. 31 no.9:20-25 S '60. (MIRA 15:5)
(Electric furnaces)

GURVICH, O. S., and RUSIN, S. P.

"Heat conductivity of materials in vacuum and inert gases"

Seminar on production methods, physical properties, and electron structure of refractory metals, compounds, and alloys, organized by the Institute of Powder Metallurgy and Special Alloys AS Ukr SSR, Kiev, 25-29 April 1963. (Teplofizika vysokikh temperatur, No. 1, 1963, p. 156)

GURVICH, O.S.; MARMER, E.N.

Mechanical properties of graphite used in electric vacuum furnaces. Porosh. met. 2 no.2:77-86 Mr-Ap '62. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrotermicheskogo oborudovaniya.
(Electric furnaces--Equipment and supplies) (Graphite)

L 1069-64 EPR/EPF(c)/EWP(q)/EWT(m)/EWP(b)/BDS AFFTC/ASD/APGC
Ps-4/Pr-4 JD/WH/K/DJ
ACCESSION NR: AT3007930 S/2957/63/000/000/0225/0231

AUTHORS: Marmer, E. N.; Gurvich, O. S. 16

TITLE: The determination of the coefficient of friction of certain steams from materials under a vacuum up to 10 minus sup 4 mm Hg during temperatures to 1200C.

SOURCE: Primeneniye vakuuma v metallurgii; trudy* Tret'yego soveshchaniya po primeneniyu vakuuma v metallurgii. Moscow, 1963, 225-231.

TOPIC TAGS: vacuum furnace, 1Kh18N9T steel, Kh23N18 steel, graphite, fluoroethylene, steel-melting furnace, steel, austenite steel, heat-resistant steel.

ABSTRACT: In contemporary mechanized vacuum furnaces the components of mechanisms work in a regime of dry friction, since liquid grease evaporates under vacuum and high temperature conditions. The authors investigated anti-frictional graphite 15 of types D and E in steam with heat-resistent austenite steel 1Kh18N9T and Kh23N18. They determined the coefficient of friction of graphite E over graphite B, fluoroethylene F4G3 over steel 1Kh18N9T and Kh23N18 and cast iron with grease from molybdenum disulfate. Studies on the influences of various factors (high vacuum, temperature, specific load, velocity of rotation) on the friction of graphite with heat-resistant steel yielded the following results: the coefficient of

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L 1069-64
ACCESSION NR: AT3007930

friction is higher in atmosphere than under vacuum; the coefficient of graphite of types D and E over steel 1Kh18N9T and Kh23N18 to a significant degree depends on graphite characteristics; the coefficient in both cases remains the same and increases insignificantly with growth of load; independently of specific loads and vacuum at 800 degrees, an increase in velocity of rotation causes an enlargement in the coefficient of friction. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 12Jul63 ENCL: 00

SUB CODE: ML NO REF SOV: 002 OTHER: 000

Card 2/2

Gurvich, O.S.

O.S. Gurvich. Heat conductivity of loose refractory powders in vacuum and inert gas.

Title: Seminar on refractory metals, compounds, and alloys (Kiev, April 1963)

Source: Atomnaya energiya, v. 15, no. 3, 1963, 266-267

L 53604-65 EWG(j)/EWT(d)/EWP(e)/EWT(m)/EWP(w)/EPF(c)/EWP(1)/EWA(d)/EWP(v)/EPR/
T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l) Pf-4/Pr-4/Ps-4 JD/WW/WH

ACCESSION NR: AP5011308 UR/0122/65/000/004/0050/0051
621.891

AUTHORS: Gurvich, O. S. (Engineer); Molchanov, P. N. (Engineer)

TITLE: Device for determining the coefficient of friction at temperatures to 2500C

SOURCE: Vestnik mashinostroyeniya, no. 4, 1965, 50-51

TOPIC TAGS: coefficient of friction, graphite

ABSTRACT: A device is described for determining the coefficient of friction of graphite in a vacuum to 10^{-3}-10^{-5} mm Hg and at temperatures to 2500C. It consists of a hermetically sealed cylinder in which is fastened a graphite sheet. A graphite sphere which is drawn across the sheet is attached to the end of a weighted rod mounted on a carriage. The carriage is coupled by a flat spring to which a high-temperature strain gauge is glued to a shaft extending through the cover of the cylinder. The strain gauge is used to determine the frictional force. Measurements of the temperature from 200-1000C are made by using a chromel-alumel thermocouple. Temperatures from 1000-2500C are determined with an optical pyrometer. The dependence of the coefficient of friction of graphite on temperature in the range 20-2200C in a vacuum of 10^{-3} mm Hg obtained by using the device is shown graphically.

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L 53604-65
ACCESSION NR: AP5011308

Orig. art. has: 5 diagrams.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ME, MT

NO REF SOV: 000 OTHER: 000

BAB
Card 2/2

IZHEVSKIY, K.M.; GURVICH, O.Ye.

Vesicular dermatitis caused by contact with plants. Pediatriia, no.5:86-87 S-O '55. (MLRA 9:2)

1. Iz detskogo otdeleniya statsionara po kozhnym boleznyam (zav. K.M. Izhevskiy) pri 5-m kozhno-venerologicheskom dispansere (glavny vrach G.A. Plotkin) Stalinskogo rayona Moskvy.

(DERMATITIS, CONTACT, etiol. and pathogen.
plants)

GURVICH, R.A., inzh.; KOLOMIYETS, V.V., inzh.

Cutting chip-curling grooves on hard-alloy plates and cutters by the electric spark method. Mashinostroenie no.5:38-40 S-O '65. (MIRA 18:9)

Gurvich, P.M.

GURVICH, P.M., inzhener; KOSMATOV, F.F.

Narrow-gauge railroad ties of prestressed concrete. Torf.prom. 34 no.5:12-14 '57. (MIRA 10:10)

1. Gosudarstvennyy institut po proyektirovaniyu zavodov torfyanoy promyshlennosti.
(Prestressed concrete) (Railroads--Ties, Concrete)

MINDAROV, M.T.; GURVICH, R.D.

Self-locking nut in a derrick. Mash. i neft. obor. no.7:34-35 '63.
(MIRA 17:1)

1. Trest "Pechorneftegazrazvedka", g. Ukhta.

PROCESSES AND PROPERTIES INDEX

Producing brick from a silica mass by the ramming method. N. M. Gurvich and S. M. Rosenblit. *Stroitel. Material.* 1935, No. 1, 37. K. R. Stefanowsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GURVICH, R. M. Cand. Tech. Sci.

Dissertation: "Investigation of the Constructional Properties of Clay Tiles and Optimum Technological Parameters." Moscow Inst of Engineers of Municipal Building, 25 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

NAUMOV, M.K.; YUSHKEVICH, M.O., redaktor; GURVICH, R.M., nauchnyy redaktor; KONVISSER, L.I., redaktor.

[Tunnel ovens for brickmaking] Tunnel'nye pechi kirpichnoi promyshlennosti. Moskva, Gos. izd-vo lit-ry po stroit. materialam, 1953. 150 p. (MLRA 7:7)
(Kilns)

GURVICH, R.M.

KITAYTSEV, V.A.; GURVICH, R.M.; KOROL'KOV, I.V.; GINZBURG, D.B., doktor tekhnicheskikh nauk, professor, retsenzent; NOKHRATYAN, K.A., kandidat tekhnicheskikh nauk, nauchnyy redaktor; SOKOL'SKIY, I.F., redaktor; LYUBKOVSKAYA, M.I., tekhnicheskiy redaktor

[Heat engineering and heating installations in the building materials industry] Teplotekhnika i teplovye ustanovki v promyshlennosti stroitel'nykh materialov. 3-e izd. perer. i dop. Moskva, Gos. izd-vo lit-ry po stroitel'nym materialam, 1954. 495 p. (MLRA 8:4)
(Heat engineering) (Building materials industry)

GORBATOV, Vladimir Ivanovich; GURVICH, Ruvim Mikhaylovich; BARANOV, L.A., redaktor; TARAYEVA, Ye.K., redaktor izdatel'stva; BOROVNEV, N.K., tekhnicheskiy redaktor

[Safety engineering in concrete and reinforced concrete work] Tekhnika bezopasnosti pri proizvodstve betonnykh i zhelezobetonnykh rabot. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1956. 30 p. (MLRA 10:1)

(Concrete construction--Safety measures)

GURVICH, Ruvim Mikhaylovich, kand. tekhn.nauk, dots.; SHNEYDER, Ye.B., red.

[Manufacturing large sand-lime concrete products; a lecture with slides] Proizvodstva krupnorazmernykh silikatobetonnykh izdelii; lektsiia s diafil'mom. Moskva, Gosstroiizdat, 1963. 12 p. (MIRA 17:9)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.

BOGOVOY, M.I., laureat Gosudarstvennoy premii dots., red.; GURVICH, R.M., red.; CHERTOK, M.Yu., red.; BARANOVA, O.N., red.; IOFFINOVA, TS.B., red.

[Improving the quality of clay building bricks] Uluchshenie kachestva glinianogo stroitel'nogo kirpicha. Moskva, Legkaia industriia, 1964. 146 p. (MIRA 18:5)

1. Vsesoyuznoye khimicheskoye obshchestvo im. D.I.Mendeleyeva. TSentral'noye i Moskovskoye pravleniya. 2. Moskovskiy inzhenerno-stroitel'nyy institut im. V.V.Kuybysheva (for Rogovoy).

GERTSEN, Petr Aleksandrovich [1871-1947]; GURVICH, R.M. [translator]

[Causes of death following bilateral vagotomy in their relation to conditions of survival] Prichiny smerti posle dvustoronnei vagotomii v ikh sviazi s usloviiami vyzhivaniia. Moskva, Medgiz, 1960. 86 p. (MIRA 14:7)

(VAGUS NERVE—SURGERY) (DEATH—CAUSES)

GURVICH, Raisa Pavlovna; KOTOVSKIY, G.G., otv.red.; GARMSEN, O.M., red.izd-va; NEGRIMOVSKAYA, R.A., tekhn.red.

[The agriculture and peasantry of India] Sel'skoe khoziaistvo Indii i polozhenie krest'ianstva. Moskva, Izd-vo vostochnoi lit-ry, 1960. 214 p. (MIRA 13:11)
(India--Agriculture) (India--Peasantry)

BATALOV, Anatoliy Leonidovich; GURVICH, Raisa Pavlovna; KOTOVSKIY, G.G., otv. red.; GARMSEN, O.M., red. izd-va; BERESLAVSKAYA, L.Sh., tekhn. red.

[Can India feed itself?] Mozhet li Indiia prokormit' sebia? Moskva, Izd-vo vostochnoi lit-ry, 1961. 97 p. (MIRA 14:12)
(India—Agriculture)

GURVICH, Raisa P.

"Agrotechnics in developing countries"

report to be submitted for the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas - Geneva, Switzerland, 4-20 Feb 63.

~~KHATUNTSEVA, A. Ya.~~, GURVICH S.I.

21-6-12/22

AUTHORS: Khatuntseva, A.Ya., Romodanova, A.P., and Gurvich (Hurvich), S.I.

TITLE: Tin-Bearing Deposits of the Northern Outskirts of the Ukrainian Crystalline Shield (Olovonosnyye rossypi severnoy okrainy Ukrainskogo kristallicheskogo shchita)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1957, No 6, pp 584-586 (USSR)

ABSTRACT: The paper presents data refuting the established notion that it is hopeless to survey for tin within the boundaries of the Ukrainian SSR. During the last years, cassiterite deposits were discovered in the northern outskirts of the Ukrainian SSR and are now being surveyed. The richest tin-bearing deposits having the most regular outlines are associated with the buried negative forms of relief within the watershed spaces of the Poles'ye peneplain. Tin-bearing sands occur usually on kaolins at the base of Paleogene glauconite-containing sediments. The content of cassiterite in the productive layer varies from 100 to 900 g per m^3, amounting sometimes to 2 to 4 kg/m^3. The mineralogical study of the erosion crust in the region of deposit occurrence has shown that cassiterite is not an accessory mineral. Of the main importance will apparently be tin-ore

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Tin-Bearing Deposits of the Northern Outskirts of the Ukrainian Crystalline Shield

bodies of the quartz-cassiterite formation accompanied with tantalum-niobium, zirconium-hafnium, tungsten, or some other mineralization.
There are 4 Slavic references.

ASSOCIATION: Institute of Geological Sciences of the AN Ukrainian SSR (Instytut heolohichnykh nauk AN URSR)

PRESENTED: By N.P.(M.P.) Semenenko, Member of the AN Ukrainian SSR

SUBMITTED: 8 March 1957

AVAILABLE: Library of Congress

GURVICH, S. I.

(

SOV/21-59-6-20/27

(Gurvich, S. I.)

AUTHORS: Hurvych, S. I., Levkivs'ka, N. Yu. (N.Yu. Levkovskaya) and Khatuntseva, A.Ya.

TITLE: On a Mineralogical Find of Tungsten Minerals in Volyn'

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1959, Nr 6, pp 659 - 661 (USSR)

ABSTRACT: The authors report on a find of tungsten minerals made in the North-Western section of the Ukrainian crystalline shield in 1956. The wolframite encountered for the first time was in foliated pieces with black, nontransparent grains. Some pieces had, however, dark red and red color, ranged from nontransparent to almost transparent. In some instances, the wolframite was found in combination with the quartz, and in separate instances in combination with the arsenopyrite. The majority of grains were within 0.6 - 0.1 mm, some reached a size of 2 - 3 mm. The chemical examinations made by B. V. Myrs'ka (table 1), and the x-ray examinations made by A. O. Karpenko (table 2), confirmed the materials as being basically wolframite, combined with an almost equal number of ferberite and huebnerite molecules.

Card 1/2

SOV/21-59-6-20/27

On a Mineralogical Find of Tungsten Minerals in Volyn'

Leaving out some insignificant impurities, the two chemical examinations have established the following crystallo chemical formulas:

1) $(Fe_{0,41}\ Mn_{0,59})\ WO_4$; 2) $(Fe_{0,46}\ Mn_{0,54})\ WO_4$.

The x-ray examination was done with the use of Fe radiation in a Debay chamber of 57.3 mm in diameter, with a Mn filter, at an exposure of 12.5 hours. Isolated sheelite grains have also been found. Under the microscope they appeared to be of more or less isotermic forms, of even optical weight, were found to be positive and possessing a rather low index of double refraction, yet an index of single refraction exceeding 1.78. There are 2 tables and 1 photo.

ASSOCIATION: Institut geologicheskikh nauk AN UkrSSR (Institute of Geological Sciences of the AS UkrSSR)

PRESENTED: By N. P. Semenenko, Member, AS UkrSSR

SUBMITTED: July 8, 1958

Card 2/2

GURVICH, S.I.

New data on the tin potential of the Ukrainian crystalline shield.
Izv. vys. ucheb. zav.; geol. i razved. 3 no.9:83-86 S '60.
(MIRA 13:12)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Dnieper Valley--Tin ores)

BUTKEVICH, T.V.; GURVICH, S.I.

Necessity of considering tungsten and molybdenum deposits as sources of beryllium. Razved. i okh. nedr 26 no.9:11-14 S '60. (MIRA 15:7)

1. Glavnoye upravleniye geologii i okhrany nedr pri Sovete Ministrov RSFSR (for Butkevich). 2. Ministerstvo geologii i okhrany nedr SSSR (for Gurvich).

GURVICH, S.I.

New titanium-bearing area in the Ukraine. Izv. vys. ucheb. zav.; geol. i razv. 4 no.3:58-60 Mr '61. (MIRA 14:6)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Ukraine--Titanium ores)

GURVICH, S.I.; BRUSNITSYNA, N.V.; DUSYATSKIY, V.A.; LUN'KO, V.F.

New promising type of beryllium-zinc mineralization. Razved. i okh. nedr 28 no.8:1-3 Ag '62. (MIRA 15:8)

1. Geologorazvedochnyy trest No.1.
(Genthelvite)

GURVICH, S.I.; KAZARINOV, L.N.; MALASHEVSKIY, A.N.

Discovery of titanium-zirconium placers in central Ciscaucasia.
Dokl.AN SSSR 144 no.3:619-621 My '62. (MIRA 15:5)

1. Predstavleno akademikom D.I.Shcherbakovym.
(Ciscaucasia—Geology, Stratigraphic)

GURVICH, S.I.; TROKHACHEV, P.A.

Concerning B.I.Kogan's book "Economic outlines on rare earths."
Izv. AN SSSR.Ser.geol. 28 no.5:104-105 My '63. (MIRA 17:4)

1. Geologorazvedochnyy trest No.1 Ministerstva geologii i okhrany nedr SSSR, Moskva.

BYBOCHKIN, A.M.; BYKHOVSKIY, L.Z.; GURVICH, S.I.; CHETYRBOTSKAYA, I.I.

Tungsten deposits as a new source of tantalum. Razved. i okh. nedr 29 no.7:10-12 Jl '63. (MIRA 16:9)

1. Gosudarstvennyy geologicheskiy komitet SSSR (for Bybochkin). 2. Geologo-geokhimicheskiy trest (for Bykhovskiy, Gurvich, Chetyrbotskaya).
(Tungsten ores) (Tantalum)

GURVICH, S.I.; ZUBKOV, L.B.; GALETSKIY, L.S.

Genthelvite from silicified syenites. Dokl. AN SSSR 150 no.5:1123-1124 Je '63. (MIRA 16:8)

1. Predstavleno akademikom D.I.Shcherbakovym.
(Syenite) (Genthelvite)

BYBOCHKIN, A.M.; BYKHOVSKIY, L.Z.; GURVICH, S.I.; CHETYRKINSKAYA, I.I.

Bismuth in tungsten deposits. Razved. i okh. nedr 30 no.2: 10-15 F '64. (MIRA 17:8)

1. Gosudarstvennyy geologicheskiy komitet SSSR i Geologo-geokhimicheskiy trest.

GURVICH, S.I.; KAZANSKOV, L.N.; KHMARA, N.V.

[Ancient rare-metal-titanium placers, methods of prospecting and evaluating them] Drevnie redkometal'no-titanovye rossypi, metody ikh poiskov i otsenki. Moskva, Nedra, 1964. 169 p. (MIRA 17:12)

GORVICH, S.I.; ZUBKOV, L.B.; GALETSKIY, L.S.

Geological and mineralogical characteristics of beryllium mineralization related to genthelvite. Sov.geol. 8 no.2:29-44 F '65. (MIRA 18:12)

GURVICH, S.I.

Find of willemite containing beryllium in the U.S.S.R. Dokl. AN SSSR 153 no.3:681-683 N '63. (MIRA 17:1)

1. Ministerstvo geologii i okhrany nedr SSSR. Predstavleno akademikom D.I. Shcherbakovym.

ARIYEV, A.M.; BEKKEROV, G.Ye.; LEBEDEV, B.M.; GUREVICH, S.I.

Further findings on application of thalium plaster in the treatment of mycoses of the part of the head covered with hair. Vest. vener., Moskva no.1:47-48 Jan-Feb 1953. (CIML 24:2)

1. Professor for Ariyevich; Candidate Medical Sciences for Bekkerov.
2. Of the Mycology Department (Head -- Prof. A. M. Ariyevich) of the Central Dermato-Venereological Institute (Director -- Candidate Medical Sciences N. M. Turanov) of the Ministry of Public Health USSR and of Moscow Mycological Dispensary (Head -- V. N. Pentkovskaya; Consultant Prof. A. M. Ariyevich).

BOKAREV, K.S.; SATAROVA, N.A.; GURVICH, S.M.

Using xanthogenates to break the dormancy of potato tubers.
Izv.AN SSSR.Ser.biol. no.3:446-450 My-Je '59. (MIRA 12:9)

1. Institute of Plant Physiology, Academy of Sciences of the U.S.S.R., Moscow.
(POTATOES) (DORMANCY (PLANTS)) (XANTHOGENATES)

RAKITIN, Yu.V.; BOKAREV, K.S.; KRAFT, V.A.; RAKITINA, Z.G.; GEYDEN, T.M.; GURVICH, S.M.

New defoliants and desiccants for cotton. Fiziol. rast. 8 no.4:506-511 '61. (MIRA 14:11)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Cottor)
(Defoliation)

GURVICH, S.M., inzh.; SHTERENBERG, M.I., inzh.

Counter-flow ion exchange. Teploenergetika 8 no.12:66-70 D '61. (MIRA 14:12)

1. TSentral'nyy nauchno-issledovatel'skiy kotloturbinnyy institut, Moskovskoye otdeleniye.

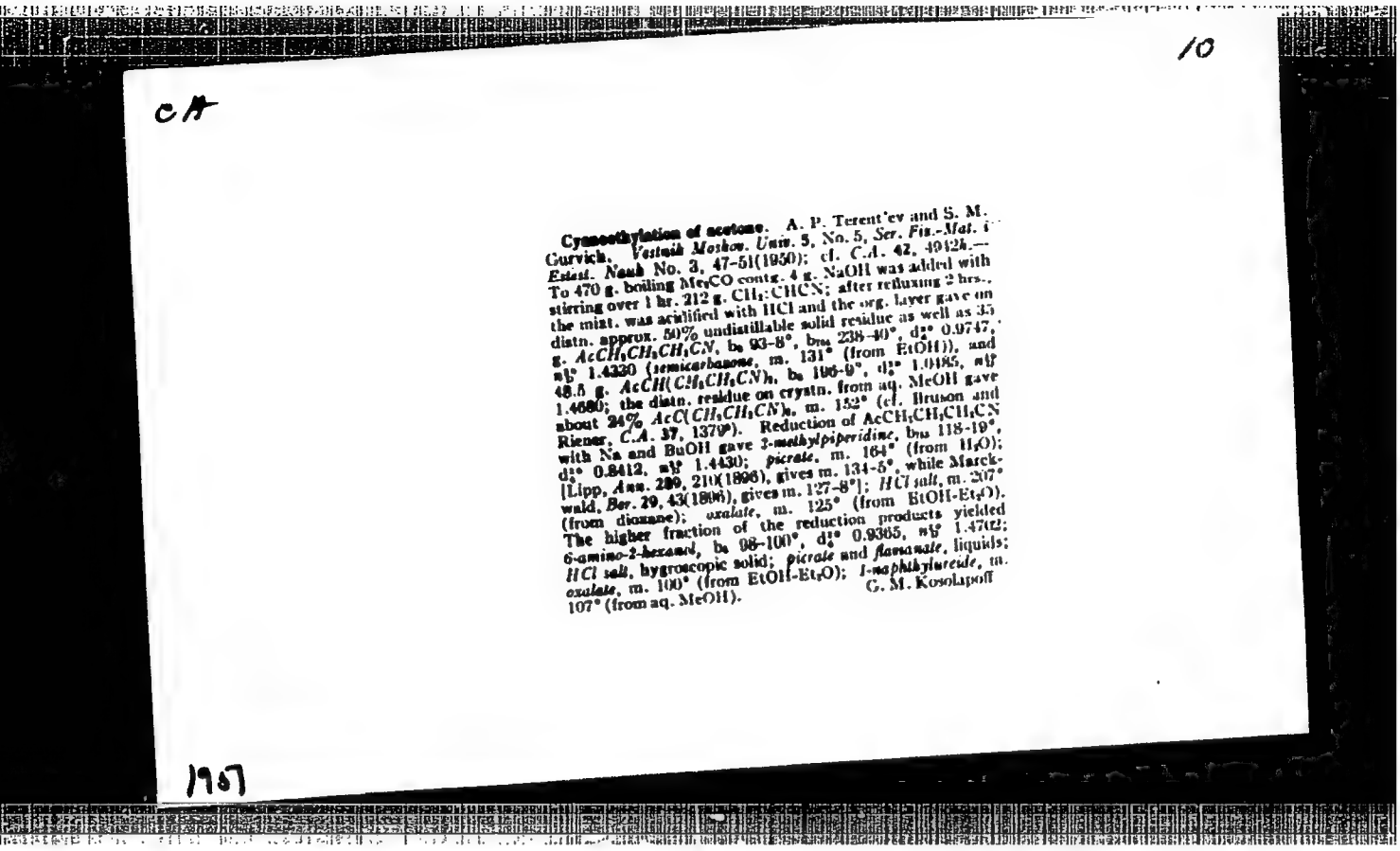
(Ion exchange)

POGOSOV, V.S., dotsent; GURVICH, S.M.

Conservative treatment of patients affected by limited labyrinthitis caused by cholesteatoma of the middle ear. Nauch.trudy Chetv.Mosk.gor.klin.bol'. no.1:283-286 '61. (MIRA 16:2)

1. Iz otolaringologicheskoy kliniki TSentral'nogo instituta usovershenstvovaniya vrachey (dir. - prof. I.I. Potapov), na baze Moskovskoy gorodskoy klinicheskoy bol'nitsy No.4 (glavnyy vrach G.F. Papko).

(LABYRINTH (EAR)—DISEASES) (EAR—TUMORS)



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CA

Cyanoethylation of acetone. A. P. Terent'ev and S. M. Gurvich. *Vestnik Moskov. Univ.* 5, No. 5, *Ser. Fiz.-Mat. i Estest. Nauk* No. 3, 47–51(1950); cf. *C.A.* 42, 4942h.—To 470 g. boiling Me_2CO contg. 4 g. NaOH was added with stirring over 1 hr. 212 g. $CH_2:CHCN$; after refluxing 2 hrs., the mixt. was acidified with HCl and the org. layer gave on distn. approx. 50% undistillable solid residue as well as 35 g. $AcCH_2CH_2CH_2CN$, bp 93–8°, b_{mm} 238–40°, d_4^{20} 0.9747, n_D^{20} 1.4330 (*semicarbazone*, m. 131° (from EtOH)), and 48.5 g. $AcCH(CH_2CH_2CN)_2$, bp 196–9°, d_4^{20} 1.0085, n_D^{20} 1.4680; the distn. residue on crystn. from aq. MeOH gave about 24% $AcC(CH_2CH_2CN)_3$, m. 152° (cf. Bruson and Riener, *C.A.* 37, 1379⁹). Reduction of $AcCH_2CH_2CH_2CN$ with Na and BuOH gave *3-methylpiperidine*, b_{760} 118–19°, d_4^{20} 0.8412, n_D^{20} 1.4430; *picrate*, m. 164° (from H_2O); [Lipp, *Ann.* 289, 210(1896), gives m. 134–5°, while Marckwald, *Ber.* 29, 43(1896), gives m. 127–8°]; *HCl salt*, m. 207° (from dioxane); *oxalate*, m. 125° (from EtOH-Et_2O). The higher fraction of the reduction products yielded *6-amino-2-hexanol*, b_8 98–100°, d_4^{20} 0.9305, n_D^{20} 1.4702; *HCl salt*, hygroscopic solid; *picrate* and *flavianate*, liquids; *oxalate*, m. 100° (from EtOH-Et_2O); *1-naphthylureide*, m. 107° (from aq. MeOH).

G. M. Kosolapoff

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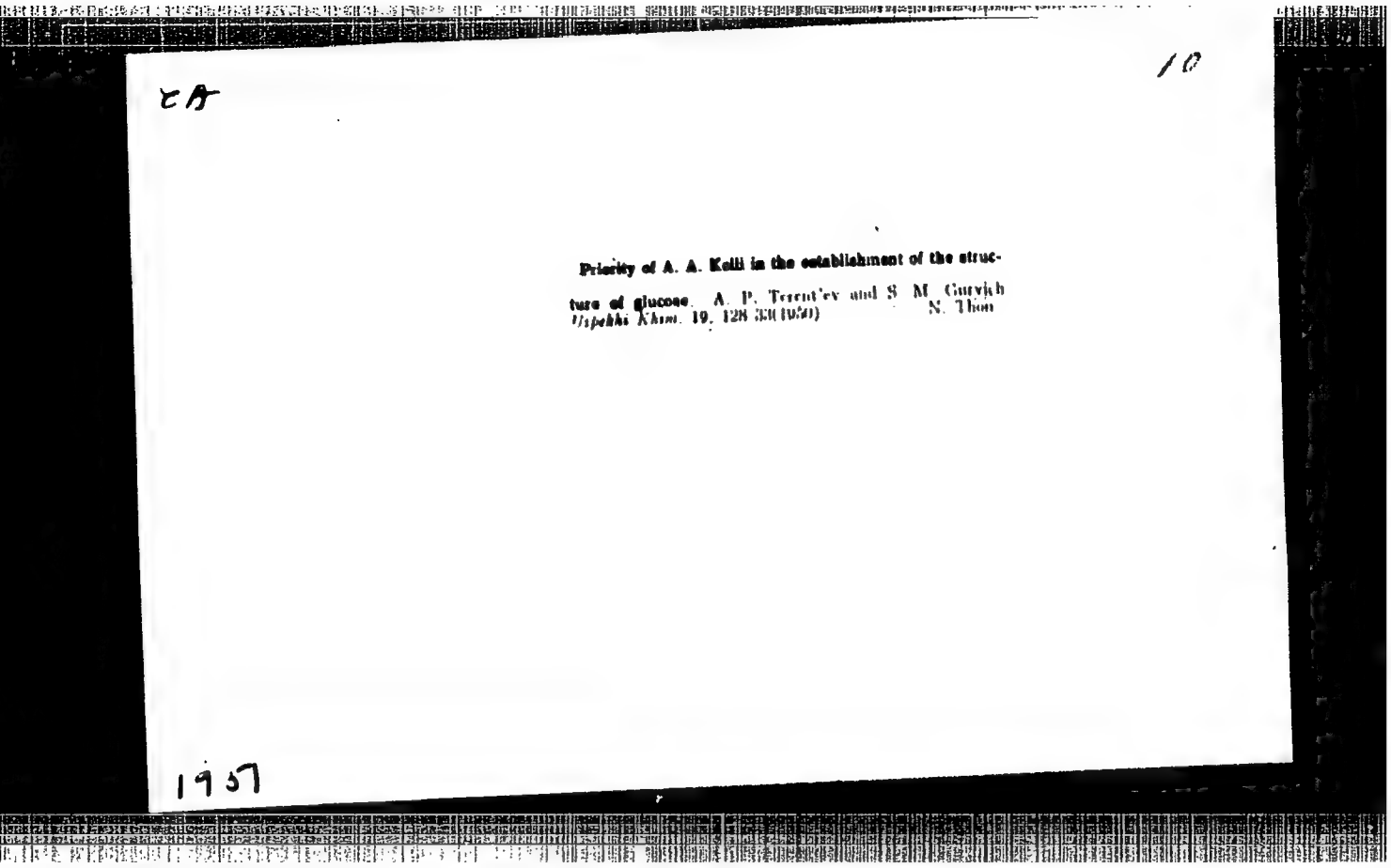

CA

10

Priority of A. A. Kalli in the establishment of the structure of glucose. A. P. Terent'ev and S. M. Gurvich N. Thon
Uspekhi Khim. 19, 128-38 (1950)

1957

GURVICH, S. M.

"Use of Acrylonitryl in the Synthesis of Nitrogen-Containing Heterocyclic Compounds." Sub 23 Nov 51, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

Cand. Chem. Sc.

TERENT'YEV, A.P.; KOST, A.N.; GURVICH, S.M.

Condensation of acrylonitrile with some dienes. Vestnik Moskov. Univ. 6, No.12, Ser. Fiz.-Mat. i Estestven. Nauk No.8, 79-83 '51. (CA 47 no.14:6877 '53)

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Syntheses with acrylonitrile. XIII. γ-Acetobutyronitrile and products of its reduction. A. P. Terent'ev and S. M. Gurvich (Moscow State Univ.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1632-7(1951); cf. *C.A.* 42, 4942h; 46, 1965h.—Addn. of CH_2:CHCN (212 g.) over 1 hr. to 470 g. stirred, refluxing Me_2CO and 4 g. solid KOH refluxing 2 hrs., cooling, acidification with HCl, sepn. of the small aq. layer, and distn. gave 35 g. *$AcCH_2CH_2CH_2CN$* (I), b_6 93-8° (crude), b_{760} 238-40°, d_4^{20} 0.9747, n_D^{20} 1.4330, can not be steam-distd., gives the CHI_3 test. Other products include *$AcCH(CH_2CH_2CN)_2$* (48.5 g.), b_6 196-9°, d_4^{20} 1.0485, n_D^{20} 1.4780, which also gives the CHI_3 test, and a cryst. undistillable residue of *$AcC(CH_2CH_2CN)_3$*, m. 152°. When 17 g. I in 400 g. boiling BuOH is treated with 21 g. Na, the usual treatment yields 2.3 g. *2-pipecoline*, b_{760} 118-19°, d_4^{20} 0.8412, n_D^{20} 1.4430 [*picrate*, m. 164° (from H_2O); *HCl salt*, m. 207°; *oxalate*, softens at 108°, m. 125°; *flavianate*, orange oil; *$PhSO_2Cl$* gives an alkali-insol. oil; *1-$C_{10}H_7NCO$* yields the corresponding urea deriv., m. 218°], and some 17% *6-amino-2-hexanol*, b_6 98-100°, d_4^{20} 0.9365, n_D^{20} 1.4702 (*HCl salt*, hygroscopic crystals; *picrate* and *flavianate*, oils; *oxalate*, m. 100°; *$PhSO_2Cl$* yields an alkali-sol. oil; *1-$C_{10}H_7NCO$* gives a compd., *$C_{28}H_{30}O_2N_4$*, m. 107°). The amino alc. apparently cyclizes in part during the reaction to yield the pipecoline. The cyanoethylation reaction of Me_2CO is more extensive with increase of temp., and regardless of reagent proportions, conditions of stirring, or order of mixing all 3 possible products always form, the tri-addn. product being always formed in 24% or higher yields.

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Syntheses with acrylonitrile. XVI. Mechanism of [illegible] reaction. A. P. Terent'ev, A. N. Kost, [illegible] S. M. Gurvich (Moscow State Univ.). [illegible]; cf. C.A. 47, [illegible]. The mechanism of the [illegible]ethylation reaction is [illegible] on an [illegible] which takes into account the normal polarization [illegible] I. The [illegible] requires heating; the mixture of the [illegible] [illegible] than that of [illegible] MePh (II). [illegible] of Kochanov [illegible] 42, 1952 [illegible] it is necessary [illegible] the presence of the [illegible].

[illegible] the product has a [illegible] I and PhCH$_2$CN do not react with II at [illegible]$^\circ$, but at [illegible] reaction occurs; hence [illegible] first [illegible] dropwise addn. of I [illegible] 2 g. [illegible] in 250 ml. C_6H_6 and 1 ml. fresh II were treated dropwise with stirring and cooling at [illegible]$^\circ$ over 3 hrs. with 58 g. I (if crystals form early, the addn. of I is interrupted, the mixt. warmed to 40° and 5-6 drops more II added), and the mixt. was stirred 2 hrs. at 40-50°, let stand overnight, and filtered, yielding 95-7% 2,2,5,5-*tetrakis*(2-cyanoethyl)cyclopentanone, m. 175.5°; Triton B catalyst gave the same result. I with AcPh in C_6H_6 with II catalyst at 20° gave [illegible]% *BzC(CH$_2$CH$_2$CN)$_3$*, m. 129-0.5°; Triton B in dioxane soln. at 30-40° gave a 57% yield and BuONMe$_2$CH$_2$Ph catalyst (III) in Me_3COH at [illegible] a 64% yield. I and PhCH$_2$CN with II in C_6H_6 at 25-30° gave 80% *PhC(CN)(CH$_2$CH$_2$CN)$_2$*, m. 71.5°; KOH in MeOH in Me_3COH solvent at [illegible]$^\circ$ gave 70%. AcCH$_2$CO$_2$Et with I in C_6H_6 and II catalyst [illegible]$^\circ$ gave [illegible] *AcC(CH$_2$CH$_2$CN)$_2$CO$_2$Et*, m. [illegible] in dioxane [illegible] 20° gave 70% and III in dioxane [illegible] I in C_6H_6 at [illegible]$^\circ$ with II catalyst [illegible] m. 17[illegible].5 [illegible] Triton B [illegible] and I with II catalyst in C_6H_6 at [illegible] *ethylene*, m. [illegible] 50% aq. soln. of 1.33 moles Me_2NH [illegible] 53 g. I and heated 5 hrs. [illegible] obtained 77% $Me_2NCH_2CH_2CN$ (IV), [illegible] piperidine heated [illegible] *$C_5H_{10}NCH_2CH_2CN$*, b$_{[illegible]}$ [illegible] 1.4[illegible], *picrate*, m. 1[illegible]$^\circ$. [illegible] IV and [illegible] 10 hrs. at 170° gave 21% [illegible] piperidine [illegible] at 120° gave [illegible]% *$C_5H_{10}NCH_2CH_2$*[illegible] [illegible] 6 hrs. at [illegible]$^\circ$ [illegible] *CH$_2$CN* [illegible] 2.5 g. [illegible] on steam bath with 32 g. CH_2[illegible] CH_2CN, and the mixt. dild. with [illegible] vols. H_2O, acidified with HCl, and extd. with Et_2O gave [illegible]% [illegible]*C)CHCH$_2$CH$_2$CN*, b$_{[illegible]}$ 110-2°, n_D^{20} 1.4390, [illegible] and 10% *(EtO$_2$C)$_2$C(CH$_2$CH$_2$CN)$_2$*, b$_{[illegible]}$ 19[illegible]-8°, m. 6[illegible]$^\circ$ (from EtOH). Heating 4.3 g. AcC(CH$_2$CH$_2$CN)$_3$, 18 ml. dry Me_2CO, and 0.5 g. solid KOH in an ampule 13 hrs. at 100° or 6 hrs. at 150° yielded no condensation product. Na (0.3 g.) in 25 ml. abs. EtOH and 3 g. AcC(CH$_2$CH$_2$CN)$_3$ refluxed 7 hrs. and the mixt. acidified with AcOH and distd. gave only the starting material; a similar reaction at [illegible]$^\circ$ over solid KOH employing the vapor of MeOH also gave a neg. result. AcC(CH$_2$CH$_2$CN)$_3$ refluxed 7 hrs. with Et_2NH did not react.

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Syntheses with acrylonitrile. XVI. Mechanism of cyanoethylation reaction. A. P. Terent'ev, M. N. Kost, and S. M. Gurvich. *J. Gen. Chem. U.S.S.R.* 23, 2027-33 (1953)(Engl. translation).—See *C.A.* 47, 8663h. II, I., II.

Syntheses with acrylonitrile XVII. Synthesis of some homologs of piperidine. A. P. Terent'ev and S. M. Gurvich. *Shornik Statei Obshchei Khim., Akad. Nauk S.S.S.R.* 1, 401-8(1953); cf. *C.A.* 47, 2602*h*; 48, 5087*g*.—To 40 g. iso-Pr-CO and 1 ml. 50% aq. NaOH was added at 80° over 1 hr. 26.5 g. CH_3:CHCN (Ia); after 3 hrs. at 80° the liquid was decanted and acidified with HCl; the org. layer was decanted, dried, and distd. yielding 28% $Me_2CHCOCMe_2CH_2CH_2CN$ (Ib), b_{20} 128–9°, d_{20} 0.9226, n_D^{20} 1.4435; some 5.2 g. crude $(NCCH_2CH_2CMe_2)_2CO$, b_4 160–80°, was also obtained. Ib (22 g.) in 400 ml. hot BuOH was treated with 31 g. Na, yielding after the usual hydrolytic treatment and steam distn. of the solvent, 39% *3,3-dimethyl-2-isopropylpiperidine*, b_{12} 69–70°, d_{20} 0.8601, n_D^{20} 1.4592 (picrate m. 201°), and 1.2 g. *7-amino-2,4,4-trimethyl-3-heptanol*, b_{12} 130–5°, m. 76° (from EtOH-Et_2O); *mono-1-naphthylurethan*, m. 262° (from AcOH). To 22.2 g. iso-PrBz was added a soln. of 0.2 g. Na in 6 ml. EtOH and the mixt. was treated over 0.5 hr. with 17 g. Ia; after stirring an addnl. hr. at room temp. the mixt. was dild. with Et_2O, filtered, and the filtrate was washed with dil. AcOH, dried and distd. to give 69% $BzCMe_2CH_2CH_2CN$, b_4 159–63°, d_{20} 1.0478, n_D^{20} 1.5204.

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This (17.5 g.) treated as above with 22 g. Na in 450 ml. BuOH gave 13% *3,5-dimethyl-2-phenylpiperidine*, b_{14} 133-7°, d_{20} 0.9516, n_D^{20} 1.5201 (picrate and flavianate could not be crystallized); *1-naphthylurethan*, m. 217°. To 10 g. cyclohexanone and 0.1 g. Na in 2.5 ml. EtOH was added in 2 hrs. 22 g. Ia; the mixt. dild. with Et_2O, filtered, and the filtrate washed with dil. AcOH, dried, and distd. yielding 3.3 g. *2-(2-cyanoethyl)cyclohexanone* (I), b_2 129-33°, d_{20} 1.0181, n_D^{20} 1.4744, and 1.2 g. *2,2-bis(2-cyanoethyl)cyclohexanone*, b_2 210-5°, m. 68° (from C_6H_6); the ppt. formed in the original reaction mixt. was an unstated yield of *2,2,6,6-tetrakis(2-cyanoethyl)cyclohexanone*, m. 164-5° (from Me_2CO). I (6 g.) reduced with 10 g. Na in BuOH to 1.8 g. *decahydroquinoline*, b_{10} 67-72° (crude), m. 46° (from ligroine, in 0.05 g. yield); *picrate*, $C_{15}H_{20}N_4O_7$, m. 156°. **XVIII. Reaction of acrylonitrile with aliphatic diazo compounds and with phenylazide.** S. M. Gurvich and A. P. Terent'ev. *Ibid.* 409-14; cf. preceding abstr.—To a mixt. of 35 ml. 40% aq. KOH and 100 ml. Et_2O was added at 5° in small portions 10 g. *N*-nitrosomethylurea, the Et_2O layer was decanted, dried 3 hrs. over KOH, and treated with cooling with 2.3 g. Ia; evapn. gave 5.9 g. viscous product consisting of *HN.CH₂.CH₂.C(CN):N* (II), b_5 116-18°, b_3 91-4°, d_4 1.135°, n_D^{20} 1.5106, which does not form a picrate; the product decomp. above 100° and on heating with alkalies it evolves NH_3. II (9.5 g.) in 500 ml. BuOH was added at once to 27.6 g. Na yielding, after the usual treatment, *1,2,4-triaminobutane*; *tripicrate*, m. 221° (decompn.). To 5.75 g. Et diazoacetate was added 2.9 g. Ia with cooling at about 40° (without cooling the reaction is explosive); after 30-40 min. the mixt. began to deposit a solid product, which was collected on the following day after partial evapn. There was obtained in all 65% *5-carbethoxypyrazoline-3-carbonitrile*, m. 96° (from EtOH). Heating 59.5 g. PhN_3 and 31.8 g. Ia on a steam bath 4 hrs. gave a vigorous reaction with N evolution; distn. gave 75% *PhN:CHCH₂CN* (III), b_4 115°, d_{20} 1.0802, n_D^{20} 1.5570. When 11.9 g. PhN_3 and 5.8 g. Ia were kept at room temp. in sealed ampul 12 days, however, there was obtained 91% *1-phenyl-Δ²-1,2,3-triazoline-4-carbonitrile*, decomp. 98°, which on strong heating gave 65% III. Hydrolysis of III with 1:4 HCl at reflux gave $PhNH_2$. Reduction of 14.4 g. III in 110 ml. EtOH by addn. of this mixt. to 23 g. powd. Na in MePh, gave after the usual aq. treatment *PhNHCH₂CH₂CH₂NH₂* (IV), b_7 134-5°, d_{20} 1.0332, n_D^{20} 1.5747 [*picrate*, decomp. 174-5°; cf. Goldenring, *Ber.* 23, 1168 (1890)]. Refluxing 46.5 g. $PhNH_2$, 27.5 g. Ia and 30 g. $PhNH_2.AcOH$ 12 hrs. at 140-50° gave on distn. 96% *PhNHCH₂CH₂CN*, b_4 140-3°, m. 48° (from dil. EtOH); this (29.2 g.) reduced in 140 ml. EtOH with 27.6 g. Na and 0.5 g. K in 120 g. MePh, as above, gave 47% IV, identical with the above specimen. G. M. Kosolapoff

[illegible]

GURVICH, S. M. and TERENT'YEV, A. P.

Syntheses by Means of Acrylonitrile. XVIII. Interaction of Acrylonitrile with Fatty Diazocompounds and with Phenylazide, page 409, Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol I, Moscow-Leningrad, 1953, pages 762-766.

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Catalytic dehydrogenation of piperidine and its homologs. A. P. Terent'ev and S. M. Gurvich. [illegible] Sbornik Statei Obshchei Khim. 2, [illegible] — Passage of piperidine over 30% Pd [illegible] gave [illegible] H and a catalyzate whose phys. constants and odor were close to those of pyridine, but the product rapidly decolorized $KMnO_4$, probably owing to the presence of tetrahydropyridine. Similarly treated 3,5-dimethyl-1-isopropylpiperidine gave only 4% H and the material was substantially unchanged. A similar result was obtained with 3,5-dimethyl-2-phenylpyridine; apparently, gem-disubstituted piperidines are not dehydrogenated under these conditions. N-Methylpiperidine gave 40.0% H and a catalyzate which was recycled through the catalyst yielding [illegible] H (total). The off-gas also contained some 5-6% CH_4. The liquid catalyzate also reacted with $KMnO_4$ and after fractional sat. on distn. from solns. of different acidities yielded pyridine as the only identified substance; it is possible that among the products there was some N-methyltetrahydropyridine; some starting material was recovered as the picrate. G. M. Kosolapoff